



## Clay Caves

**Pre-visit activity** connection to the Cave and Canopy Climber

**Grade level/standards:** **2<sup>nd</sup> grade** NGSS 2-ESS1-1, 2-ESS2-1, 2-ESS2-2, CCSS RI.2.3, RI.2.4;  
**4<sup>th</sup> grade** NGSS 4-ESS1-1, 4-ESS2-, CCSS RI.4.3, RI.4.4; **5<sup>th</sup> grade** NGSS 5-ESS2-1 CCSS  
RI.5.3, RI.5.4

**Concepts:** formation of caves through erosion

**Materials needed:** clay, sugar cubes, newspaper, water

### **Procedure:**

1. Introduce caves by making a list on the board of the facts your students already know about caves. What words come to mind when they think about caves? While your students are probably familiar with the popular image of caves, they may be surprised by how few facts they know. List all the caves they know in the state of Arkansas.
2. With a simple science experiment, help your students understand how caves form. Give each student six ounces of clay and a dozen sugar cubes. The clay will represent sandstone, a hard rock, and the sugar, limestone.
3. Working on a newspaper-covered surface, students should mold the clay around the sugar cubes, being careful to leave at least part of a sugar cube exposed. By arranging the sugar cubes, they will be determining the shape of their caves.
4. When students have finished constructing the caves, leave the caves to dry for several days, and then soak the structures in water. The sugar will dissolve, leaving the hollowed out spaces.

### **What's Happening:**

Caves are natural openings within the earth that usually extend deep beyond the reach of light. They are found in many types of rock, but are most common in limestone and gypsum. These caves were formed by water under the surface of the earth.

### **Book List:**

1. Home in the Cave by Janet Halfman

2. Castles, Caves and Honeycombs by Lauren Stringer
3. Oscar and the Bat by Geoff Waring
4. Caves by Stephen Kramer

**Extension Activities:**

Have your students visit the following websites:

The Virtual Cave

[www.goodearthgraphics.com/virtcave.html](http://www.goodearthgraphics.com/virtcave.html)

Exploring Caves K-3

<http://interactive2.usgs.gov/learningweb/teachers/explore caves.htm>